

Penn State Journal of Law & International Affairs

Volume 5

Issue 2 *Contemporary Writings in a Global Society: Collected Works*

June 2017

We Don't Need no Education - Is the U.S. at Risk of Losing its Clear Edge in Higher Education?

Ann M. Murphy

Follow this and additional works at: <https://elibrary.law.psu.edu/jlia>



Part of the [Diplomatic History Commons](#), [History of Science, Technology, and Medicine Commons](#), [International and Area Studies Commons](#), [International Law Commons](#), [International Trade Law Commons](#), [Law and Politics Commons](#), [Political Science Commons](#), [Public Affairs, Public Policy and Public Administration Commons](#), [Rule of Law Commons](#), [Social History Commons](#), and the [Transnational Law Commons](#)

ISSN: 2168-7951

Recommended Citation

Ann M. Murphy, *We Don't Need no Education - Is the U.S. at Risk of Losing its Clear Edge in Higher Education?*, 5 PENN. ST. J.L. & INT'L AFF. 464 (2017).
Available at: <https://elibrary.law.psu.edu/jlia/vol5/iss2/9>

The Penn State Journal of Law & International Affairs is a joint publication of Penn State's School of Law and School of International Affairs.

Penn State Journal of Law & International Affairs

2017

VOLUME 5 NO. 2

WE DON'T NEED NO EDUCATION¹ – IS THE U.S. AT RISK OF LOSING ITS CLEAR EDGE IN HIGHER EDUCATION?

*Ann M. Murphy**

¹ PINK FLOYD, ANOTHER BRICK IN THE WALL (Sony/Columbia 1987).

* Professor of Law, Gonzaga University School of Law. Professor Murphy expresses her profound gratitude to the Fulbright U.S. Scholar Program, U.S. Department of State, Bureau of Educational and Cultural Affairs. Through the generosity of this program, Professor Murphy taught law during the 2007-2008 academic year as a Fulbright Scholar in Beijing, PRC and during the 2014-2015 academic year as a Distinguished Chair, Fulbright Scholar in Shanghai, PRC. Special thanks to Zhou Jiali (law graduate of the Shanghai University of Finance and Economics and member of the Chinese bar), my Chinese research assistant, aide, and friend.

TABLE OF CONTENTS

I. INTRODUCTION	466
II. CHINESE STUDENT ENROLMENT IN US UNIVERSITIES	466
III. THE TROUBLE WITH CHINESE EDUCATION	473
A. Chinese Entrance Exam – the <i>Gaokao</i>	473
B. The Chinese Registration System – the <i>Hukou</i>	476
IV. THE US ENTRANCE EXAM – THE SAT.....	478
V. FIERCE COMPETITION PROMOTES UNETHICAL MEASURES.....	481
VI. INVESTMENT IN HIGHER EDUCATION.....	483
VII. CONCLUSION	485

I. INTRODUCTION

“My dream is to attend university in the United States!” These are words I heard countless times while teaching law as a Fulbright Scholar in China for two years. My initial reaction was that he or she must want to study, travel, and experience life in the United States (U.S.). I soon realized that my colleagues on the faculties of Chinese universities, students’ parents, and nearly every educated Chinese person I spoke with yearned to study in the United States. Our system of higher education is a precious commodity that we must not squander. Education is not an area where one may rest on one’s laurels. In the words of Bob Dylan, “that he not busy being born is busy dying”² – a country must move ahead in education or risk falling behind.

The U.S. is clearly a global leader in higher education, and it is essential that we maintain our edge, both for the benefit of American students and for the export of our educational system to international students. Most U.S. universities have discovered that Chinese students help their bottom line economically, but the true benefit is so much greater than just that. Currently, China has the world’s largest economy and is home to one-fifth of the worldwide population.³ Due to economic reforms in China over the past ten years, 203 million people are now included in their middle class. As a result, the demand for a world-class education has increased with the growth of this middle class.

II. CHINESE STUDENT ENROLMENT IN US UNIVERSITIES

Chinese students have been enrolling in higher education institutions of the United States in record numbers since 2010.⁴ From

² BOB DYLAN, IT’S ALRIGHT, MA (I’M ONLY BLEEDING) (Columbia 1965).

³ Rakesh Kochhar, *Mapping the Global Population: How Many Live on How Much, and Where*, PEW RESEARCH CENTER (2015).

⁴ *Open Doors Fact Sheet: China*, INST. OF INT’L EDUC., 2015, <http://www.iie.org/Research-and-Publications/Open-Doors/Data/Fact-Sheets-by-Country/2015#.WBI53pMrLdc> ; Glen M. Vogel, *A Study of the Language &*

2007 to 2015, there has been a 166 percent increase in the number of students from China studying in the U.S.⁵ In 2015, Chinese students made up over 30 percent of the total international students enrolled in higher education institutions within the U.S.⁶ Even the daughter of the President of China, Xi Mingze, attended and graduated from Harvard College in 2015.⁷ In the past five years, applications to Boston University alone from Chinese students increased by a whopping 236 percent.⁸ The University of Illinois (Urbana-Champaign) has the largest number of international students of any public higher education institution in the U.S., and “nearly 5,000 of whom are Chinese.”⁹ There has also been a “remarkable growth of foreign attorneys enrolled at U.S. law schools and particularly in LL.M. programs.”¹⁰

Previously, Chinese students “tended to be graduate students living on tight budgets,”¹¹ but recently the number of undergraduate students has surged, and now there are more undergraduate Chinese students than graduate Chinese students.¹² Although many of these

Cultural Challenges Facing Business & Legal Studies Faculty in the Ever-Expanding Global Classroom, 13 J. INT’L BUS. & L. 127, 129 (2014).

⁵ *Id.*

⁶ *Open Doors Data: International Students: Leading Places of Origin*, INST. OF INT’L EDUC., 2015 <http://www.iie.org/Research-and-Publications/Open-Doors/Data/International-Students/By-Academic-Level-and-Place-of-Origin/2014-15>.

⁷ Evan Osnos, *What Did China’s First Daughter Find in America?*, THE NEW YORKER, Apr. 6, 2015 (Magazine), <http://www.newyorker.com/news/news-desk/what-did-chinas-first-daughter-find-in-america>.

⁸ Laura Krantz, *Number of Foreign College Students in Boston Surges*, THE BOSTON GLOBE, Nov. 17, 2015, <https://www.bostonglobe.com/metro/2015/11/16/number-foreign-students-boston-surges/0rrwqyAoHbSjn6f7chxxMI/story.html>.

⁹ Sarah Svoboda, *Why Do So Many Chinese Students Choose US Universities?*, BBC NEWS, June 2, 2015, <http://www.bbc.com/news/business-32969291>.

¹⁰ Lmindie Lazarus-Black & Julie Globokar, *Foreign Attorneys in U.S. LL.M. Programs: Who’s In, Who’s Out, and Who They Are*, 22 IND. J. GLOBAL LEGAL STUD. 3, 5 (2015).

¹¹ Matt Schiavenza, *The Tenuous Relationship between American Universities and Chinese Students*, THE ATLANTIC, May 30, 2015 (Magazine), <http://www.theatlantic.com/education/archive/2015/05/american-universities-are-addicted-to-chinese-students/394517/>.

¹² *Open Doors Data: International Students: Academic Level and Place of Origin*, INSTITUTE OF INTERNATIONAL EDUCATION, <http://www.iie.org/Research-and-Publications/Open-Doors/Data/International-Students/By-Academic-Level-and->

students are from affluent families who own Lamborghinis and flashy clothes,¹³ a growing number are from lower middle-class families.¹⁴ The number of international students has grown so dramatically that the University of California Regents voted “to cap the number of out-of-state and international students at UCLA and UC Berkeley at their current levels – about 30%.”¹⁵ The number of out-of-state and international students has become so high that two California legislators introduced Assembly Bill No. 1711 to the California legislature on January 26, 2016; if passed, this bill will “limit the percentage of undergraduate nonresident students enrolled at the University of California system-wide to 15.5% of total undergraduate student enrollment.”¹⁶ Similar measures have been enacted in Iowa and Washington.¹⁷ Although in the past students from China were enrolling in post-graduate education, now Chinese students are applying to attend U.S. high schools and even primary schools.”¹⁸

Place-of-Origin/2014-15. ; *Chinese Enrollment in the US Shifting Increasingly to Undergraduate Studies*, INTERNATIONAL CONSULTANTS FOR EDUCATION AND FAIRS (ICEF) MONITOR , May 27, 2015, <http://monitor.icef.com/2015/05/chinese-enrolment-in-the-us-shifting-increasingly-to-undergraduate-studies/> (“Data reveals that the flow of Chinese students into US undergraduate programmes is speeding up at the same time as demand for American graduate programmes (the historic core of Chinese enrolment in the US) has been slowing.”)

¹³ See Christopher Beam, *Children of the Yuan Percent: Everyone Hates China's Rich Kids*, BLOOMBERG BUS., Sept. 30, 2015, <http://www.bloomberg.com/news/features/2015-10-01/children-of-the-yuan-percent-everyone-hates-china-s-rich-kids>. (The young, fabulously wealthy second-generation rich Chinese are referred to as *feurdaï*).

¹⁴ Frank Shyong, *Not Only China's Wealthy Want to Study in America*, THE L.A. TIMES, Dec. 28, 2015, <http://www.latimes.com/local/california/la-me-chinese-students-20151228-story.html>.

¹⁵ *Id.*

¹⁶ University of California: Nonresident Student E, Cal. S. AB-1711 (2016), http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160AB1711.

¹⁷ Miriam Jordan, *International Students Stream into U.S. Colleges*, THE WALL ST. J., Mar. 24, 2015, <http://www.wsj.com/articles/international-students-stream-into-u-s-colleges-1427248801>.

¹⁸ Miriam Jordan, *U.S. Schools Draw More Chinese*, THE WALL ST. J., Dec. 17, 2015, <http://www.wsj.com/articles/u-s-schools-draw-more-chinese-1450400223>.

The top six states with foreign students are California, New York, Texas, Massachusetts, Illinois, and Pennsylvania.¹⁹

There are a number of reasons for this rapid increase in the number of Chinese students attending U.S. universities. The United States is considered to have the best higher education institutions in the world. Of the several published best university rankings in the world, each of them shows the U.S.'s dominance over the rankings. The U.S. News and World Report rankings published near the end of 2015 rates eight U.S. universities in the top ten of universities worldwide.²⁰ Of the top 100 universities, the U.S. houses 53.²¹ The Times Higher Education World University Rankings for 2015-2016 lists the U.S. as having 39 of the top 100, and six of the top ten higher education institutions.²² The Center for World University Rankings for 2015 lists the U.S. as having eight of the top ten institutions and 54 of the top 100 universities.²³ The CS World University Rankings for 2015/16 shows U.S. universities as six of the top ten and 30 of the top 100 institutions in the world.²⁴ Clearly, the United States is the global leader in higher education.

Conversely, Chinese universities are ranked relatively lower in global rankings of universities according to the above-referenced rankings. The U.S. News and World Report rankings include three Chinese universities in the top 100 global university rankings, where Peking University is tied for #41, Tsinghua University is #59, and Fudan University at #96.²⁵ The Times Higher Education World University rankings show two Chinese universities in the top 100:

¹⁹ Krantz, *supra* note 9.

²⁰ *Best Global Universities Rankings 2017*, U.S. NEWS & WORLD REPORT, <http://www.usnews.com/education/best-global-universities/rankings>.

²¹ *Id.*

²² World University Rankings 2015-2016, THE TIMES HIGHER EDUCATION, <https://www.timeshighereducation.com/world-university-rankings/2016/world-ranking#!/page/0/length/25>.

²³ *CWUR 2015: World University Rankings*, CENTER FOR WORLD UNIVERSITY RANKINGS (CWUR), <http://cwur.org/2015/>.

²⁴ QS World University Rankings 2015/16, QS TOP UNIVERSITIES, [http://www.topuniversities.com/university-rankings/world-university-rankings/2015#sorting=rank+region="+country="+faculty="+stars=false+search=](http://www.topuniversities.com/university-rankings/world-university-rankings/2015#sorting=rank+region=).

²⁵ U.S. NEWS & WORLD REPORT *supra* note 21.

Peking University at #42 and Tsinghua University at #47.²⁶ The Center for World University Rankings lists two Chinese universities, Peking University at #56 and Tsinghua University at #78.²⁷ Finally, QS World University Rankings include four Chinese universities in its top 100 with Tsinghua University at #25, Peking University at #41, Fudan University at #51, and Shanghai Jiao Tong University at #70.²⁸

The rankings are certainly uppermost in the minds of Chinese students and their parents,²⁹ but Chinese students are interested in U.S. universities for more reasons than the prestige of the top universities.³⁰ “The ambitions of Chinese students are shifting. No longer are they attracted just by the glittering names. Pursuit of education abroad is becoming an end in itself.”³¹ The growing Chinese middle class prefers a “well-rated university overseas to a second-tier option at home.” As noted above, only Peking University and Tsinghua University are ranked in the world top 100. These two schools have room for only 6,000 new students a year.³² That is one-twentieth of one percent of the Chinese college entrance exam takers.³³

Chinese students and their parents are also attracted to American methods of teaching. In the U.S., students are encouraged to be curious, which is generally not true of Chinese higher

²⁶ THE TIMES HIGHER EDUCATION, *supra* note 23.

²⁷ CENTER FOR WORLD UNIVERSITY RANKINGS (CWUR), *supra* note 24.

²⁸ QS TOP UNIVERSITIES, *supra* note 25.

²⁹ TEA LEAF NATION STAFF, *For Chinese Students in America, a Transformative Journey*, FOREIGN POLICY, Dec. 9, 2015, <http://foreignpolicy.com/2015/12/09/for-chinese-students-in-america-a-transformative-journey-fp-survey-exclusive-results/>, (“Respondents overwhelmingly said they were drawn by the quality of American education, with over 77 percent listing it as their primary reason for studying abroad.”)

³⁰ *Georgia on their Minds*, THE ECONOMIST, China ed., Feb.21, 2015 (Magazine).

³¹ *Id.*

³² Doug Bandow, *Transforming China from Within: Chinese Students Head to American Universities*, FORBES, Sept. 22, 2014, <http://www.forbes.com/sites/dougbandow/2014/09/22/transforming-china-from-within-chinese-students-head-to-american-universities/#339da382918f>.

³³ *Id.*

education.³⁴ Many Chinese find their higher education system “too rigid and ideologically stifling.”³⁵ There is a great difference between the American style of critical thinking (particularly in law school) versus the Chinese style of rote memorization.³⁶ “In China, people often humorously compare the traditional method of conveying information to a student to “feeding a duck”: you feed it, and feed it, and feed it until the duck is full, and then you’re done.”³⁷ Chinese students and their parents find that study abroad “is more student-centered and individualized.”³⁸ Some residents of China believe the education in China, which rewards rote-style learning, stifles students’ creativity and critical thinking abilities.³⁹

One important difference between the U.S. and Chinese higher education systems is the flexibility of choice in the U.S. The American education system gives students the freedom to choose their field of study.⁴⁰ My students in China were astounded by the fact that my son changed his major four times in college. In China, a student’s test score determines his or her field of study.⁴¹ In fact, only the highest scoring students are able to study lucrative majors such as finance and economics.⁴² According to one student, “Chinese education makes you memorize a lot of things but don’t let [sic] you have your opinion to exercise your mind.” Indeed, the U.S. education

³⁴ Janet Eom, *The Eagle, the Dragon, and the “Excellent Sheep,”* FOREIGN POLICY, Oct. 20, 2015, <http://foreignpolicy.com/2015/10/20/china-us-america-education-ivy-league-college-testing-innovation/>.

³⁵ *Georgia on their Minds*, *supra* note 31.

³⁶ Erin Ryan, Xin Shuai, Yuan Ye, You Ran, Li Haomei, *When Socrates Meets Confucius: Teaching Creative and Critical Thinking Across Cultures Through Multilevel Socratic Method*, 92 NEB. L. REV. 289 (2013); TEA LEAF NATION STAFF, *supra* note 30.

³⁷ Ryan, at 307.

³⁸ Andrew Ross, *How the Children of China’s Elite Learned to (By)pass the Gaokao*, CHINA ECON. REV., July 11, 2015, <http://www.chinaeconomicreview.com/how-children-chinas-elite-learned-bypass-gaokao>.

³⁹ Duncan Hewitt, *Fraud Rings, Drone Surveillance and Extra Police – It’s China’s ‘Killer’ University Exams*, INT’L BUS. TIMES, June 9, 2015, <http://www.ibtimes.com/fraud-rings-drone-surveillance-extra-police-its-chinas-killer-university-exams-1957897>.

⁴⁰ Svoboda, *supra* note 10.

⁴¹ *Id.*

⁴² Janet Eom, *supra* note 33.

system has been described as offering “the freedom to be indecisive and the ability to change your mind.”⁴³

The price of a U.S. university education far exceeds the price of a Chinese education.⁴⁴ In China, Tsinghua University charges 40,000 CNY (Chinese Yuan Renminbi), or \$6,140 USD, while Fudan University charges 25,000 CNY, or \$3,838, for tuition.⁴⁵ On the other hand, an international student is charged \$45,000 per year for tuition at Harvard College and anywhere between \$32,096 and \$41,376 for tuition at the University of Illinois.⁴⁶ Additionally, most Chinese students are ineligible for federal financial aid.⁴⁷ Nevertheless, “Chinese parents see American education as the most valuable of commodities and are willing to make sacrifices to get it.”⁴⁸ A sacrifice it is. The tuition is “the equivalent of nearly ten times the average annual disposable income of urban households” in China.⁴⁹ In somewhat of a win-win situation for U.S. universities and Chinese students, “foreign students have become crucial to many public universities” because the universities may charge these students full tuition.⁵⁰ The Greater Boston Convention & Visitors Bureau President referred to this as “a Super Bowl of education spending.”⁵¹

⁴³ Shyong, *supra* note 15.

⁴⁴ *Tuition Fee Less than \$4,000 in Top 100 China Universities: Most Affordable China Universities*, CHINA’S UNIVERSITY AND COLLEGE ADMISSION SYSTEM (CUCAS), http://news.cucas.edu.cn/Admission_Express/Tuition-fee-less-than-4,000-in-Top-100-China-Universities%E0%BC%9AMost-Affordable-China-Universities-_2644.html.

⁴⁵ *Id.*

⁴⁶ *Tuition and Expenses*, HARVARD COLLEGE: HARVARD UNIVERSITY, <https://college.harvard.edu/financial-aid/how-aid-works/cost-attendance>; *Tuition*, UNIVERSITY OF ILLINOIS: ADMISSIONS, <https://admissions.illinois.edu/Invest/tuition>.

⁴⁷ TEA LEAF NATION STAFF, *The Most Chinese Schools in America*, Foreign Policy, Jan. 4, 2016, <http://foreignpolicy.com/2016/01/04/the-most-chinese-schools-in-america-rankings-data-education-china-u/>.

⁴⁸ *U.S. Schools Draw More Chinese*, *supra* note 19.

⁴⁹ *Chinese Enrollment in the US Shifting Increasingly to Undergraduate Studies*, *supra* note 13.

⁵⁰ *International Students Stream into U.S. Colleges*, *supra*, note 18.

⁵¹ Laura Krantz, *For Some Foreign Students, a Driving Passion for Luxury*, THE BOSTON GLOBE, Oct. 10, 2015, <https://www.bostonglobe.com/metro/2015/10/10/for-some-foreign-students-driving-passion-for-luxury/eYkBwYnXa4ZRDmT2s3mhUO/story.html>.

In a move that bucks the recent trend of limiting the number of international students, lawmakers in Colorado “passed a law in 2010 that exempts state colleges from a 45% cap on out-of-state students.”⁵²

III. THE TROUBLE WITH CHINESE EDUCATION

A. Chinese Entrance Exam – the *Gaokao*

There is only one road to a university education in China – a certain passing score on the *gaokao*, the National College Entrance Exam (NCEE).⁵³ “Unlike in the U.S., no amount of community service, interview prep, or athletic heroics will help you get into a top school.”⁵⁴ A high score on the *gaokao* means entry into a prestigious university with an expected lucrative major.⁵⁵ The Chinese Ministry of Education sets two “cutoff” points.⁵⁶ There is a higher cutoff point for prestigious universities and a lower cutoff point for general university admission.⁵⁷ Additionally, students’ *gaokao* score determine their major.⁵⁸ The Chinese entrance exam is referred to as “the SAT on steroids.”⁵⁹ The top scorers on the *gaokao* are referred to as the

⁵² *International Students Stream into U.S. Colleges*, *supra* note 18.

⁵³ Tessa Wong, *China’s Gaokao: High Stakes for National Exam*, BBC NEWS, June 9, 2015, <http://www.bbc.com/news/world-asia-china-33059635>.

⁵⁴ Yuling Yang, *Take the Test to Get into China’s Top Universities*, BLOOMBERG NEWS, June 2, 2015, <http://www.bloomberg.com/news/articles/2015-06-02/take-the-test-to-get-into-china-s-top-universities>.

⁵⁵ Vogel, *supra* note 5.

⁵⁶ Amy Burkhoff, “One Exam Determines One’s Life”: The 2014 Reforms to the Chinese National College Entrance Exam, 38 FORDHAM INT’L L.J. 1473 (2015).

⁵⁷ *Id.*

⁵⁸ Terry Crawford, *What Students in China Have Taught Me About U.S. College Admissions*, THE ATLANTIC, Jan. 6, 2015 (Magazine), <http://www.theatlantic.com/education/archive/2015/01/what-students-in-china-have-taught-me-about-us-college-admissions/384212/>.

⁵⁹ Yang, *supra* note 55.

zhuangyuan, or principal graduate, and “often become brief media darlings.”⁶⁰

The *gaokao* was first administered in 1952. The exam is loosely based on the imperial exam system that was used to reward merit rather than birthright for job opportunities as government officials from 1644 to 1911.⁶¹ Between 1911 and 1949, universities had their own individual tests for admission.⁶² This system was replaced by a uniform exam given across the country (the test does vary by province). The exam was seen as a way to “countervail nepotism and inherited wealth.”⁶³ The use of the *gaokao* was suspended from 1966 through 1976 during the Great Proletarian Cultural Revolution, commonly known as the Cultural Revolution.⁶⁴ In fact, during the Cultural Revolution, schools and universities were closed from 1966 through the beginning of 1970.⁶⁵ When schools reopened, “revolutionary purity” was the basis of college admissions from 1970 until 1973.⁶⁶

The Cultural Revolution ended in 1976 with the death of Chairman Mao Zedong, China’s supreme leader, and the arrest of the

⁶⁰ See Yifu Dong, *China’s Cutthroat Academic Competition is Ruining a generation of Youth*, FOREIGN POLICY, June 30, 2015, <http://foreignpolicy.com/2015/06/30/in-chinas-cutthroat-academic-competition-ruining-generation-of-youth-gaokao-wealth-power/> ; see also, *Girls Outperform Boys among Gaokao Top Scorers*, PEOPLE’S DAILY, July 1, 2015, <http://en.people.cn/n/2015/0701/c90782-8914129.html> (Interestingly, women are more often the *zhuangyuan* in the regions of China).

⁶¹ Edward Wong, *Test That Can Determine the Course of Life in China Gets a Closer Examination*, N.Y. TIMES, June 30, 2012, <http://www.nytimes.com/2012/07/01/world/asia/burden-of-chinas-college-entrance-test-sets-off-wide-debate.html> ; Luo Wangshu, *History in the Making: the Classes of 1977, 1978 and 1979*, CHINA DAILY, Mar. 31, 2015, http://usa.chinadaily.com.cn/epaper/2015-03/31/content_19963835.htm; Crawford, *supra* note 59 (“The practice of using exams to locate talent and distribute scarce educational opportunities began as early as 650 AD.”)

⁶² Wangshu, *supra* note 62.

⁶³ Dong, *supra* note 61.

⁶⁴ *Id.*

⁶⁵ Stephanie Lamb, *Introduction to the Cultural Revolution* (adapted from Jonathan Spence, *THE SEARCH FOR MODERN CHINA*, (2001)), SPICE DIGEST, (2007), <http://spice.fsi.stanford.edu/sites/default/files/CRintro.pdf>.

⁶⁶ *Id.*

“Gang of Four.”⁶⁷ When the *gaokao* was first reinstated, 5.7 million students took the exam and only 278,000 were placed in universities, constituting a placement rate of approximately one half of one percent of all those who took the exam.⁶⁸ Opportunities improved slightly by 1984, when 1.6 million students took the exam and 430,000 won spots in Chinese universities, an increased chance of nearly three percent.⁶⁹ By 2011, the Chinese higher education system had grown so substantially that one’s chance of being accepted to a higher education institution increased to nearly 69 percent.⁷⁰ Today, a Chinese student’s chances are greatly improved. China now has approximately 1,145 universities.⁷¹ In June of 2015, 9.42 million students took the *gaokao*, a number close to the entire population of the state of Michigan.⁷² During the same year, 7.5 million students graduated from Chinese colleges. Although data is not available for the percentage of those taking the *gaokao* who were admitted to Chinese universities, it currently appears to be close to 80 percent, quite a change from the 1970’s. Nevertheless, the chance of being admitted to a top-100 globally ranked university in China is still extremely slim. One must also keep in mind that for those who do not pass the *gaokao*, a university education in China is impossible and the individual is essentially relegated to a low-income job.⁷³ There is a

⁶⁷ Paul L. Barresi, *The Chinese Legal Tradition as a Cultural Constraint on the Westernization of Chinese Environmental Law and Policy: Toward a Chinese Environmental Law and Policy Regime with More Chinese Characteristics*, 30 PACE ENVTL. L. REV. 1156, 1193 (2013).

⁶⁸ Jeffery Hays, *The Gaokao: the Chinese University Entrance Exam*, FACTS AND DETAILS, 2008, <http://factsanddetails.com/china/cat13/sub82/item1649.html>.

⁶⁹ *Id.*

⁷⁰ Vogel, *supra* note 5, at 137.

⁷¹ Embassy of Switzerland in China, *Research and Higher Education in China* (Jan. 27, 2015), <http://www.swissnexchina.org/wp-content/uploads/sites/4/2014/07/Higher-Education-in-China-2014.pdf>.

⁷² Xinhua, *9.42m to Sit for College Entrance Exam*, CHINA DAILY, June 6, 2015, http://www.chinadailyasia.com/nation/2015-06/07/content_15273341.html.

⁷³ Vogel, *supra* note 5, at 138.

lot at stake. Moreover, Chinese teenagers' chances of university education depend upon where they reside in China.⁷⁴

B. The Chinese Registration System – the *Hukou*

A major barrier to higher education in China is the *hukou*, the country's registration system.⁷⁵ "Chinese students from rural China are at a great disadvantage compared to their urban counterparts when taking the *gaokao* and have lower chances of gaining admission to top tier universities."⁷⁶ The *hukou* system began in 1958 and was designed to ensure the country's agricultural system.⁷⁷ Prior to the *hukou* system, China experienced a large influx of rural peasants to the cities.⁷⁸ Officials were fearful that the mass migration could destabilize the relatively new system of government.⁷⁹ The *hukou* system was borrowed from the Soviet Union, which had a "model of rapid industrialization, political organization, and legal institutions."⁸⁰ Under the system, every citizen in China "inherits a household registration at birth, which may be altered only under very limited exceptions."⁸¹ From 1958 until the late 1970's, rural to urban migration was "essentially halted."⁸² Beginning in the late 1970's, the ban on migration was eased.⁸³

During the 1980's, 1990's, and early 2000's, approximately 140 million Chinese citizens migrated from rural villages and towns to cities.⁸⁴ Despite their new homes, they are not entitled to public

⁷⁴ Yiqian Fu, *China's Unfair College Admissions System*, The Atlantic, June 19, 2013, (Magazine), <http://www.theatlantic.com/china/archive/2013/06/chinas-unfair-college-admissions-system/276995/>.

⁷⁵ Yang, *supra* note 55, at p. 1499.

⁷⁶ *Id.* at 1476.

⁷⁷ *Id.* at 1478.

⁷⁸ Margaret Y.K. Woo, Christopher Day, & Joel Hugenberg, *Migrant Access to Civil Justice in Beijing*, 4 LOY. U. CHI. INT'L L. REV. 167, 173-174. (2007).

⁷⁹ *Id.*

⁸⁰ Hilary K. Josephs, *Residence and Nationality as Determinants of Status in Modern China*, 46 TEX. INT'L L.J. 295 (2011).

⁸¹ *Id.* at 297.

⁸² Woo, *supra* note 77, at 174.

⁸³ *Id.*

⁸⁴ *Id.* at 167.

services available to urban residents.⁸⁵ They are treated as second-class citizens and are referred to as *liudong renkou*, or the “floating population.”⁸⁶ Though millions of workers have migrated to larger cities for jobs,⁸⁷ children of migrant workers must return to their home provinces to take the university entrance exam.⁸⁸ Due to a quota system, it is much easier for a student who has a Beijing or Shanghai *hukou* to attend the universities considered the best in China.⁸⁹ The two top ranking Chinese universities, Peking University and Tsinghua, both located in Beijing, admit Beijing resident students at a much higher rate than students from other provinces.⁹⁰ The score required by a Beijing-based test-taker may be much lower than the qualifying score for a rural test-taker.⁹¹ The top two universities admitted an average of 84 students out of every 10,000 Beijingers and two out of every 10,000 from the Guangdong province in 2014.⁹² Due to the *hukou* system, “an examinee from wealthy Beijing or

⁸⁵ Andrew Scheineson, *China's Internal Migrants*, COUNCIL ON FOREIGN RELATIONS, May 14, 2009, <http://www.cfr.org/china/chinas-internal-migrants/p12943>.

⁸⁶ *Id.*; Matt Sheehan, *13 Million People in China Don't Have the Document that Would Guarantee Them Rights*, THE HUFFINGTON POST: THE WORLD POST, Dec. 10, 2015, http://www.huffingtonpost.com/entry/china-undocumented-residents_us_56692ca3e4b080eddf570d99.

⁸⁷ Huaxia, ed., *China to Orderly Urbanize Migrant Workers: Premier Li*, XINHUA, Feb. 1, 2016 (By 2014, China estimated its number of migrant workers at approximately 274 million, or 20 percent of China's population).

⁸⁸ Fu, *supra* note 75.

⁸⁹ *Id.*; Wong, *supra* note 62.

⁹⁰ Fu, *supra* note 73.

⁹¹ *Id.*; Indeed, a widely circulated joke on Weibo (a microblogging network, referred to as the Twitter of the East) is the following:

In Beijing: “Dad, I got a 530 [on the *gaokao*], 50 points higher than the lowest qualifying score for top-tier universities!” “Great job, son! Let’s go to Shanghai for our vacation!”

In Shandong: “Dad, I got a 530, 20 points lower than the lowest qualifying score for second-tier universities!” “You’re not so bright...Don’t go [to college]. Get out of here and go become a migrant worker in Shanghai.”

In Shanghai: “Dad, I got a 330. Send me abroad.” “Okay, son. Go get an MBA, then come back and help me. I got another group of migrant workers from Shandong this year.”

⁹² *Id.*

Shanghai may gain admission to elite education with a lower score than someone from impoverished Anhui.”⁹³

China has announced that it plans to change the *hukou* system in order to “promote greater equality between urban residents and migrant workers and their children.”⁹⁴ On February 1, 2016, Chinese Premier Li Keqiang stated that the government would improve the permit system.⁹⁵ In the meantime, an increasing number of Chinese students are opting out of the *gaokao* and instead taking the American SAT, the U.S. standard test for college admission.⁹⁶

IV. THE US ENTRANCE EXAM – THE SAT

The precise number of Chinese students who have taken the SAT is unknown, although the College Board, the non-profit agency that owns the exam, indicated it will publish the number in the future.⁹⁷ One online test preparation company estimates that 55,000 Chinese took the SAT in 2014.⁹⁸ It is known that overseas registrants for the SAT have increased dramatically since 2009.⁹⁹ The number of registrants from “East Asia and Pacific” has increased by 76 percent in just the past five years.¹⁰⁰ This trend may not continue. The SAT exam has been recently revised and the changes are viewed as

⁹³ Josephs, *supra* note 81 at 303.

⁹⁴ Burkoff, *supra* note 57 at 1479.

⁹⁵ Huaxia, ed., *supra* note 88.

⁹⁶ EL Borromeo, *Over 9 Million Chinese Students Take National College Entrance Exam*, YIBADA, June 9, 2015, <http://en.yibada.com/articles/37346/20150609/over-9-million-chinese-students-take-national-college-entrance-exam.htm>.

⁹⁷ Nick Anderson, *How Many Chinese Take the SAT Every Year? We May Soon Learn*, THE WASH. POST, Oct. 31, 2014, https://www.washingtonpost.com/local/education/how-many-chinese-take-the-sat-every-year-we-may-soon-learn/2014/10/31/7ba6b35a-6124-11e4-9f3a-7e28799e0549_story.html.

⁹⁸ Alexa Olesen, *China's Hot New Luxury Product: the SAT*, FOREIGN POLICY, June 8, 2015, <http://foreignpolicy.com/2015/06/08/chinas-hot-new-luxury-product-the-sat-scholastic-aptitude-test/>.

⁹⁹ Te-Ping Chen and Abby Schultz, *Cheating Concerns in Asia Cloud SAT Testing*, THE WALL ST. J., June 5, 2015, <http://www.wsj.com/articles/cheating-concerns-in-asia-cloud-sat-testing-1433549895>.

¹⁰⁰ *Id.*

disadvantageous to Chinese students.¹⁰¹ The new SAT includes more reading passages, passages from US founding documents, no mandatory writing section, and “wordier math problems.”¹⁰² Interestingly, China’s new official China News Agency criticized the change in the SAT due to “worries [that] the materials may impose the American values system on students.”¹⁰³ A Chinese student may opt to take the ACT instead of the SAT, as American universities accept students based on ACT scores as well. A very small number of U.S. universities accept scores on the *gaokao* in lieu of the SAT or ACT.¹⁰⁴

The record number of foreign students taking admission exams to gain entry to U.S. universities has unfortunately resulted in increased cheating on these entrance exams. On May 21, 2015, a federal grand jury in Pittsburgh, Pennsylvania indicted fifteen Chinese nationals on charges of conspiracy, counterfeiting foreign passports, mail fraud, and wire fraud by having imposters take college and graduate school standardized entrance examinations.¹⁰⁵ The United

¹⁰¹ Zhao Xinying, *Students Urged to Seek SAT Alternatives*, CHINA DAILY, Feb. 23, 2016, http://www.chinadaily.com.cn/china/2016-02/23/content_23601140.htm.

¹⁰² *Id.*; Amy He, *Overhauled SAT Exam May Pose Hurdles for Chinese*, CHINA DAILY, Feb. 23, 2016, http://www.chinadaily.com.cn/world/2016-02/23/content_23598053.htm.

¹⁰³ Tommy Yang, *China Complains SAT may impose American Values on its Best Students*, THE L.A. TIMES, Aug. 30, 2014, <http://www.latimes.com/world/asia/la-fg-sat-exam-american-values-chinese-students-20140829-story.html>.

¹⁰⁴ Abby Schultz, *U.S. Colleges Put China’s Gaokao to the Test*, BARRONS, Oct. 30, 2015, <http://www.barrons.com/articles/u-s-colleges-put-chinas-gaokao-to-the-test-1446188818>, (These universities are reportedly Suffolk University, St. Thomas University, The University of San Francisco (pilot program) and the Illinois Institute of Technology.) ; Elizabeth Redden, *Giving ‘Gaokao’ a Go*, INSIDE HIGHER ED, May 20, 2015, <https://www.insidehighered.com/news/2015/05/20/u-san-francisco-gives-gaokao-based-admissions-try-china>; Amy He, *Gaokao Exam Looks for Wider Acceptance*, CHINA DAILY, June 5, 2015, http://usa.chinadaily.com.cn/china/2015-06/05/content_20923416.htm.

¹⁰⁵ Press Release, *Fifteen Chinese Nationals Charged in Fraud Scheme*, U.S. DEPT. OF JUSTICE, Office of Public Affairs (May 28, 2015), <https://www.justice.gov/opa/pr/fifteen-chinese-nationals-charged-fraud-scheme>.

States Attorney in the Western District indicated that he “believed the issue extended beyond the 15 people charged.”¹⁰⁶

In 2015, the College Board, which administers the SAT “delayed thousands of scores in Asia.”¹⁰⁷ The College Board cancelled the SAT exam in five countries, including 43 sites in China in January 2016.¹⁰⁸ Previously, Chinese students needed to travel to Hong Kong to take the SAT,¹⁰⁹ but in August of 2012, the test was made available to Chinese students who attended one university prep school in mainland China.¹¹⁰ Currently, the SAT is offered at “select international schools” in China.¹¹¹ The exam was cancelled however in January of 2016 because some students “may have already seen copies of the tests.”¹¹² A magazine based in Beijing demonstrated in an article from September of 2015 just how easy it is to cheat on the SAT in China.¹¹³

¹⁰⁶ Jess Bidgood, *15 Chinese Accused of Using Test-Taking Impostors for College Entrance Examinations*, N.Y. Times, May 28, 2015, <http://www.nytimes.com/2015/05/29/us/15-chinese-accused-of-using-test-taking-impostors-for-college-entrance-exams.html>.

¹⁰⁷ Chen, *supra* note 100.

¹⁰⁸ Abby Schultz, *SAT Integrity Falls Victim to China Cheating Scandal*, BARRON'S, Jan. 25, 2016, <http://www.barrons.com/articles/sat-integrity-falls-victim-to-china-cheating-scandal-1453713163>.

¹⁰⁹ Ernest Kao, *Thousands of Mainland Students Flock to Hong Kong for SAT Exams*, SOUTH CHINA MORNING POST, Dec. 4, 2012, <http://www.scmp.com/news/china/article/1096372/thousands-mainland-students-flock-hong-kong-sat-exams>.

¹¹⁰ Mike Liberty, *Summer SAT Administration Now Available to Chinese Students*, BUSINESS WIRE, Apr. 15, 2012, <http://www.businesswire.com/news/home/20120415005096/en/Summer-SAT-Administration-Chinese-Students>.

¹¹¹ Te-Ping Chen & Abby Schultz, *Battle to Thwart SAT Cheating in Asia Continues*, THE WALL ST. J., June 7, 2015, <http://blogs.wsj.com/chinarealtime/2015/06/07/battle-to-thwart-sat-cheating-in-asia-continues/>.

¹¹² Joe Mandak, *College Board Cancels SATs in China Over Cheating Concerns*, US News and World Report, Jan. 22, 2016, <http://www.usnews.com/news/us/articles/2016-01-21/sat-tests-canceled-in-china-macau-over-cheating-concerns>.

¹¹³ An Ran & Qian Wei, *Put to the Test*, NEWSCHINA MAGAZINE, Sept. 2015, <http://old.newschinamag.com/magazine/put-to-the-test>.

V. FIERCE COMPETITION PROMOTES UNETHICAL MEASURES

It is not surprising that, given the importance of exams, and the fact that “one exam determines one’s life,” unethical tactics abound.¹¹⁴ Moreover, there is a perception that “the system is rigged.”¹¹⁵ Students and schools are “getting a lot of community and parental pressure” for students to attend a top-ranked school.¹¹⁶ Application materials to U.S. universities may be forged and falsified. By one estimate, “90 percent of Chinese applicants submit fake recommendations, 70 percent have other people write their essays, 50 percent have forged high school transcripts, and 10 percent list academic awards and other achievements they did not receive.”¹¹⁷ Undoubtedly, these estimates are high, but “when Chinese students are taught by their parents, teachers, and governmental officials to cheat in order to succeed on the *gaokao* and their admissions endeavors in their homeland, it is not surprising that the dishonesty would spill over to their efforts to get accepted into an American college or university.”¹¹⁸

Universities in the U.S. are taking notice. At the 2015 Overseas Association for College Admission Counseling (OACAC) conference, the participants discussed the problems, the reasons, and the need “to make [the application process] safe for honest applicants.”¹¹⁹ One of the main reasons for the unethical conduct is the use of agencies to assist in the application process. There are over 400 educational consulting firms that are certified by the Chinese Ministry of Education and thousands more that are unlicensed.¹²⁰

¹¹⁴ Vogel, *supra* note 5; Nicola Davison, *Revealed: The Extreme Revision Measures Taken by Chinese University Hopefuls*, THE TELEGRAPH, Aug. 15, 2015, <http://www.telegraph.co.uk/education/11794171/Revealed-the-extreme-revision-measures-taken-by-Chinese-university-hopefuls.html>.

¹¹⁵ Elizabeth Redden, *In China, No Choice But to Cheat?*, INSIDE HIGHER ED, July 9, 2015, <https://www.insidehighered.com/news/2015/07/09/admissions-process-broken-chinese-students>.

¹¹⁶ *Id.*

¹¹⁷ Vogel, *supra* note 5; Schiavenza, *supra* note 12.

¹¹⁸ Vogel, *supra* note 5 at 139.

¹¹⁹ *In China, No Choice But to Cheat?*, *supra* note 116.

¹²⁰ Shen Lu and Katie Hunt, *Fraud Frenzy? Chinese Seek U.S. College Admission at any Price*, CNN, July 14, 2015, <http://www.cnn.com/2015/07/12/asia/china-education-agencies/>.

These agencies often promise to help a student gain acceptance to a Top-50 U.S. university, and may be paid partially on a success basis, increasing the incentive to falsify applications.¹²¹ One prominent agent estimated that one half of the transcripts were “doctored” to make the candidate more competitive.¹²² In one instance, ten different applicants from the same school claimed to be the top student in the class.¹²³ It is no small wonder that honest students believe they are unable to compete with students who use agents. One student interviewed stated, “I did feel slightly guilty but all my friends did the same thing.”¹²⁴

Another reason for unethical behavior is that there is virtually no punishment if one is caught cheating on U.S. exams or on their application materials. One participant at the OACAC Conference stated “it blows my mind that students who cheat on the SAT get to take the test again – why aren’t they outed to all of your schools?”¹²⁵ In China, students “face expulsion and even jail time for cheating on their country’s rigorous college entrance exam.”¹²⁶ However, there is essentially no price to pay if one is caught cheating on the SAT.¹²⁷

Finally, the entire U.S. university application process is perplexing for Chinese citizens. In a country that sees test scores as the only way to get ahead (“in rural China a top *gaokao* score can lift the fortune of an entire family, promising a life beyond the fields for generations to come”),¹²⁸ the listing of extracurricular activities is

¹²¹ Crawford, *supra* note 59.

¹²² *Id.*

¹²³ Stephanie Yang, *The Unbelievable Things Some Chinese Students are Doing to Get into US Colleges*, BUS. INSIDER, Feb. 27, 2015, <http://www.businessinsider.com/chinese-students-go-to-crazy-lengths-in-us-university-applications-2015-2>.

¹²⁴ Johan Nylander, *How Chinese Students are ‘Cheating’ to Get into U.S. Universities*, FORBES, July 13, 2015, <http://www.forbes.com/sites/jnylander/2015/07/13/how-chinese-students-are-cheating-to-get-into-u-s-universities/#14375e6d1573>.

¹²⁵ *In China, No Choice But to Cheat?*, *supra* note 116.

¹²⁶ Laura Krantz and Jessica Myers, *Fight to Find Cheats Takes Schools Around the World*, THE BOSTON GLOBE, Jan. 16, 2016, <https://www.bostonglobe.com/metro/2016/01/19/chinese-students-hungry-attend-universities-caught-fraudulent-application-process/gpRB06mqBVAsxZ6eAbFKCJ/story.html>.

¹²⁷ Davison, *supra* note 115.

¹²⁸ Nicola Davidson, *Revealed: The Extreme Revision Measures Taken by Chinese University Hopefuls*, THE TELEGRAPH, August 15, 2015, <http://www.telegraph>.

quite foreign. Also, many times the students' teachers are not sufficiently proficient in English to write letters of recommendations.¹²⁹ Further, Chinese students are not particularly familiar or comfortable with admission essays.¹³⁰ If a family has the financial means, of course they consult these "expert" agencies.

The falsification of application material hurts both potential students and students who do in fact "make it" to U.S. universities. In the period between 2012 and 2015, U.S. universities expelled 8,000 Chinese students due to low grades and cheating.¹³¹ Schools in the U.S. have recently begun to verify information through U.S. agencies and Skype interviews with students to combat the fraudulent applications.¹³² American universities must ensure Chinese candidates are submitting accurate application materials in order to maintain the integrity of U.S. universities. Perhaps U.S. and Chinese authorities would be willing to work together to monitor questionable application agents operating in China. This equally benefits China, as approximately 75 percent of Chinese students who study abroad return to China.¹³³

VI. INVESTMENT IN HIGHER EDUCATION

During the same time frame as the increased demand for higher education, U.S. state support for higher education has decreased significantly.¹³⁴ In fact, since my first year teaching in

co.uk/education/11794171/Revealed-the-extreme-revision-measures-taken-by-Chinese-university-hopefuls.html.

¹²⁹ Krantz, *supra* note 127.

¹³⁰ *Id.*

¹³¹ Max Kutner, *U.S. Colleges Expelled as Many as 8,000 Chinese Students in 3 Years*, NEWSWEEK, May 29, 2015, <http://www.newsweek.com/us-colleges-expelled-many-8000-chinese-students-3-years-337445>.

¹³² Krantz, *supra* note 127.

¹³³ *Number of Chinese Outbound Students up by 11% in 2014*, ICEF MONITOR, Mar. 31, 2015, <http://monitor.icef.com/2015/03/number-of-chinese-outbound-students-up-by-11-in-2014/>.

¹³⁴ Michael Mitchell and Michael Leachman, *Years of Cuts Threaten to Put College Out of Reach for More Students*, CENTER ON BUDGET AND POL'Y PRIORITIES, May 13, 2015, <http://www.cbpp.org/research/state-budget-and-tax/years-of-cuts-threaten-to-put-college-out-of-reach-for-more-students>.

China, “forty-seven states are spending less per student in the 2014-15 school year than they did at the start of the recession,” in 2008.¹³⁵ Conversely, the Ministry of Education in China has increased spending on an average of 20 percent per year over the past decade.¹³⁶ Certainly the spending in China improves access to basic education in its developing economy, but it also indicates government priorities. Recently, the budget cuts of many U.S. higher education institutions has been dramatic. State appropriations for higher education has decreased by 14.6 percent since 2007.¹³⁷ The States’ budget choices will determine whether they can successfully rebuild their higher education systems.”¹³⁸

The U.S. is currently the global leader in higher education, but efforts must be made to continue this leadership. In 2010, Richard C. Levin, the President of Yale University predicted the rise of Asia’s universities.¹³⁹ He correctly indicated the Chinese goal of creating world-class universities as a benefit to all economies. The President further stated, “Competition in education, like the phenomenon of globalization itself, is a positive sum game.”¹⁴⁰

China is investing approximately \$250 billion annually in higher education, and the number of Chinese universities had doubled over the past decade.¹⁴¹ According to former Yale President Levin, “in 25 years, only a generation’s time, these universities could rival the Ivy League.”¹⁴² In a new book published by the Institute of International Education and the American Institute for Foreign Study Foundation, “leading scholars, practitioners, and education policy

¹³⁵ *Id.*

¹³⁶ *China’s Education Spending on the Rise*, XINHUA, Nov. 20, 2015, http://news.xinhuanet.com/english/2015-11/20/c_134838051.htm.

¹³⁷ Mitchell, *supra* note 134.

¹³⁸ *Id.*

¹³⁹ President Richard C. Levin, Speech at the Royal Society, *The Rise of Asia’s Universities*, (Jan. 31, 2010) (transcript available at Yale Office of Public Affairs & Communications).

¹⁴⁰ *Id.*

¹⁴¹ Doug Bandow, *Transforming China from Within: Chinese Students Head to American Universities*, FORBES, Sept. 22, 2014, <http://www.forbes.com/sites/dougbandow/2014/09/22/transforming-china-from-within-chinese-students-head-to-american-universities/#230e278b918f>.

¹⁴² *Id.*

experts from 10 different countries” predict that Asia will be the next higher education superpower.¹⁴³ In an interview with Inside Higher Ed, Mark S. Ferrara, the author of *Palace of Ashes: China and the Decline of American Higher Education*, Ferrara compares the “substantial and enduring investments in higher education” in China with America’s decline in spending on higher education.¹⁴⁴

VII. CONCLUSION

Without question, increased access to higher education and the improvement of universities, no matter where situated, mutually benefit every society. Nevertheless, if the quality of education in the United States continues to decrease, the U.S. will be harmed. In the past five years, Congress has cut federal funding for elementary and high school education by 20 percent.¹⁴⁵ If higher education in the U.S. becomes less desirable, other countries will fill the void. It would be a shame if the United States lost its place as the world leader of higher education. Education must not go the way of the steel industry. This Author hopes to be able to return to China again and continue hearing “My dream is to attend university in the United States!”

¹⁴³ Press Release, Asia: the Next Higher Education Superpower?, INSTITUTE OF INTERNATIONAL EDUCATION, (Mar. 11, 2015), <http://www.iie.org/en/Who-We-Are/News-and-Events/Press-Center/Press-Releases/2015/2015-03-10-Asia-the-Next-Higher-Education-Superpower#.WBbAbpMrJR0>.

¹⁴⁴ Elizabeth Redden, *Palace of Ashes: Author Discusses New Book Arguing that China’s Universities are Rising while America’s Decline*, INSIDE HIGHER ED, Nov. 12, 2015, <https://www.insidehighered.com/news/2015/11/12/author-discusses-new-book-arguing-chinas-universities-are-rising-while-americas>.

¹⁴⁵ Allie Bidwell, *Report: Federal Education Funding Plummets*, U.S. New and World Report, June 24, 2015, <http://www.usnews.com/news/blogs/data-mine/2015/06/24/report-federal-education-funding-cut-by-5-times-more-than-all-spending>.